Avaya Business Communications Manager Release 6.0

Avaya BCM-IVR Integration Supplement

NN40070-304

Document status: Standard
Document version: 03.01
Document date: 22 June 2010

©2010 Avaya Inc.
All Rights Reserved.

Notice

While reasonable efforts have been made to ensure that the information in this document is complete and accurate at the time of printing, Avaya assumes no liability for any errors. Avaya reserves the right to make changes and corrections to the information in this document without the obligation to notify any person or organization of such changes.

Documentation disclaimer

Avaya shall not be responsible for any modifications, additions, or deletions to the original published version of this documentation unless such modifications, additions, or deletions were performed by Avaya. End User agree to indemnify and hold harmless Avaya, Avaya's agents, servants and employees against all claims, lawsuits, demands and judgments arising out of, or in connection with, subsequent modifications, additions or deletions to this documentation, to the extent made by End User.

Link disclaimer

Avaya is not responsible for the contents or reliability of any linked Web sites referenced within this site or documentation(s) provided by Avaya. Avaya is not responsible for the accuracy of any information, statement or content provided on these sites and does not necessarily endorse the products, services, or information described or offered within them. Avaya does not guarantee that these links will work all the time and has no control over the availability of the linked pages.

Warranty

Avaya provides a limited warranty on this product. Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya’s standard warranty language, as well as information regarding support for this product, while under warranty, is available to Avaya customers and other parties through the Avaya Support Web site: http://www.avaya.com/support

Please note that if you acquired the product from an authorized reseller, the warranty is provided to you by said reseller and not by Avaya.

Licenses

THE SOFTWARE LICENSE TERMS AVAILABLE ON THE AVAYA WEBSITE, HTTP://SUPPORT.AVAYA.COM/LICENSEINFO/ ARE APPLICABLE TO ANYONE WHO DOWNLOADS, USES AND/OR INSTALLS AVAYA SOFTWARE, PURCHASED FROM AVAYA INC., ANY AVAYA AFFILIATE, OR AN AUTHORIZED AVAYA RESELLER (AS APPLICABLE) UNDER A COMMERCIAL AGREEMENT WITH AVAYA OR AN AUTHORIZED AVAYA RESELLER. UNLESS OTHERWISE AGREED TO BY AVAYA IN WRITING, AVAYA DOES NOT EXTEND THIS LICENSE IF THE SOFTWARE WAS OBTAINED FROM ANYONE OTHER THAN AVAYA, AN AVAYA AFFILIATE OR AN AVAYA AUTHORIZED RESELLER, AND AVAYA RESERVES THE RIGHT TO TAKE LEGAL ACTION AGAINST YOU AND ANYONE ELSE USING OR SELLING THE SOFTWARE WITHOUT A LICENSE. BY INSTALLING, DOWNLOADING OR USING THE SOFTWARE, OR AUTHORIZING OTHERS TO DO SO, YOU, ON BEHALF OF YOURSELF AND THE ENTITY FOR WHOM YOU ARE INSTALLING, DOWNLOADING OR USING THE SOFTWARE (HEREINAFTER REFERRED TO INTERCHANGEABLY AS “YOU” AND “END USER”), AGREE TO THESE TERMS AND CONDITIONS AND CREATE A BINDING CONTRACT BETWEEN YOU AND AVAYA INC. OR THE APPLICABLE AVAYA AFFILIATE (“AVAYA”).

Copyright

Except where expressly stated otherwise, no use should be made of the Documentation(s) and Product(s) provided by Avaya. All content in this documentation(s) and the product(s) provided by Avaya including the selection, arrangement and design of the content is owned either by Avaya or its licensors and is protected by copyright and other intellectual property laws including the sui generis rights relating to the protection of databases. You may not modify, copy, reproduce, republish, upload, post, transmit or distribute in any way any content, in whole or in part, including any code and software. Unauthorized reproduction, transmission, dissemination, storage, and or use without the express written consent of Avaya can be a criminal, as well as a civil offense under the applicable law.

Third Party Components

Certain software programs or portions thereof included in the Product may contain software distributed under third party agreements ("Third Party Components"), which may contain terms that expand or limit rights to use certain portions of the Product ("Third Party Terms"). Information regarding distributed Linux OS source code (for those Products that have distributed the Linux OS source code), and identifying the copyright holders of the Third Party Components and the Third Party Terms that apply to them is available on the Avaya Support Web site: http://support.avaya.com/Copyright.

Trademarks

The trademarks, logos and service marks (“Marks”) displayed in this site, the documentation(s) and product(s) provided by Avaya are the registered or unregistered Marks of Avaya, its affiliates, or other third parties. Users are not permitted to use such Marks without prior written consent from Avaya or such third party which may own the Mark. Nothing contained in this site, the documentation(s) and product(s) should be construed as granting, by implication, estoppel, or otherwise, any license or right in and to the Marks without the express written permission of Avaya or the applicable third party. Avaya is a registered trademark of Avaya Inc. All non-Avaya trademarks are the property of their respective owners.

Downloading documents

For the most current versions of documentation, see the Avaya Support. Web site: http://www.avaya.com/support

Contact Avaya Support

Avaya provides a telephone number for you to use to report problems or to ask questions about your product. The support telephone number is 1-800-242-2121 in the United States. For additional support telephone numbers, see the Avaya Web site: http://www.avaya.com/support

Revision History

March 2007
Standard 1.2

February 2007
Standard 1.1. This version contains a new chapter on backing up folders in Avaya BCM.

July 2006
Standard 1.0.

Contents

Preface 9
Scope 9
Intended Audience 9
Customer service 9
Navigation 9
Getting technical documentation 10
Getting product training 10
Getting help from a distributor or reseller 10
Getting technical support from the Avaya Web site 10
How to Use This Manual 10
Organization of This Manual 10
Conventions Used in This Manual 11
Solaris and Windows Conventions 13
Two-Button (Windows) vs. Three-Button (Solaris) Mouse 13
Trademark Conventions 13

Chapter 1 Introduction to the Avaya BCM-IVR Integration 15
The Avaya Business Communications Manager (Avaya BCM) - Interactive Voice Response (IVR) Integration 15
What functionality does the IVR integration add to the Avaya BCM? 15
Documentation issues 16

Chapter 2 COMMGR for the Avaya BCM Platform 17
Documentation issues and workarounds 17
Installation issues and workarounds 18
Functionality issues and workarounds 19

Chapter 3 PeriView for the Avaya BCM Platform 21
Documentation issues and workarounds 21
Functionality issues and workarounds 22
Additional alarms for the Avaya BCM platform 23
Issuing commands to the Avaya BCM 24

Chapter 4 PeriReporter for the Avaya BCM Platform 27
Configuring windows workstations to retrieve statistics 27
Configuring the collection stations 28
Changing the monitored Avaya BCM nodes 29

Documentation issues and workarounds 29
Functionality issues and workarounds 30
Phone Line Statistics reports variances for the Avaya BCM platform 31

Chapter 5 Folders on the Avaya BCM Platform 33
Backing up folders 33
Folders provided for use by IVR developers 34

Index 35

Preface

Scope

Avaya Business Communications Manager (Avaya BCM) is a communications platform that delivers voice processing, business telephony applications, and data networking services. To extend these capabilities, has integrated existing IVR software to run on the Avaya BCM platform.

The ***Avaya BCM-IVR Integration*** manual explains variances in COMMGR, PeriView, and PeriReporter software functionality when it is integrated with Avaya BCM. It is not meant to replace their individual user guides; it is meant only to be used as a supplement to them.

Intended Audience

This guide assumes that the user has completed an on-site system familiarization training program conducted as part of the initial system installation. In addition, they should be familiar with other site-specific operating procedures relating to the Avaya BCM that are due to specific application functions performed by the Avaya BCM and with any other equipment to which the Avaya BCM may be connected. Basic knowledge of your operating system(s) software is also assumed.

Customer service

Visit the Avaya Web site to access the complete range of services and support that Avaya provides. Go to www.avaya.com or go to one of the pages listed in the following sections.

Navigation

- "Getting technical documentation" (page 10)
- "Getting product training" (page 10)
- "Getting help from a distributor or reseller" (page 10)
- "Getting technical support from the Avaya Web site" (page 10)

Getting technical documentation

To download and print selected technical publications and release notes directly from the Internet, go to www.avaya.com/support.

Getting product training

Ongoing product training is available. For more information or to register, you can access the Web site at www.avaya.com/support. From this Web site, you can locate the Training contacts link on the left-hand navigation pane.

Getting help from a distributor or reseller

If you purchased a service contract for your Avaya product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller for assistance.

Getting technical support from the Avaya Web site

The easiest and most effective way to get technical support for Avaya products is from the Avaya Technical Support Web site at www.avaya.com/support.

How to Use This Manual

This manual uses many standard terms relating to computer systems, software application functions, and the Internet. However, it contains some terminology that can be explained only in the context of the MPS Series. Refer to the *Glossary of Avaya Media Processing Server Series Terminology* for definitions of MPS Series specific terms.

Read this manual from start to finish at least once. When you are familiar with the document, you can use the Table of Contents to locate topics of interest for reference and review.

If you are reading this document online, use the cross-reference links (shown in blue) to quickly locate related topics. Position your cursor over the cross-reference link and click once. Click any point in a Table of Contents entry to move to that topic. Click the page number of any Index entry to access that topic page.

Familiarize yourself with various specialized textual references within the manual see "Conventions Used in This Manual" (page 11).

> ***Note:*** Periphonics is now part of . The name Periphonics, and variations thereof, appear in this manual only in reference to a product (for example, the `PERImps` package, the **`perirev`** command, and so on).

Organization of This Manual

This manual is organized in the following way:

Chapter 1 — Introduction to the Avaya BCM-IVR Integration

Overviews the Avaya BCM and what functionality the IVR integration brings to Avaya BCM. Explains how to access documentation on Helmsman.

Chapter 2 — COMMGR for the Avaya BCM Platform

Discusses documentation, installation, and functionality variances in COMMGR for the Avaya BCM platform.

Chapter 3 — PeriView for the Avaya BCM Platform

Discusses documentation and functionality variances in PeriView for the Avaya BCM platform. Explains alarms that have been added for the Avaya BCM, and how to issue commands.

Chapter 4 — PeriReporter for the Avaya BCM Platform

Discusses documentation, functionality, and Phone Line Statistics reports variances in PeriReporter for the Avaya BCM platform.

Chapter 5— Folders on the Avaya BCM Platform

Discusses folders included in the process of backing up IVR Data and IVR Configuration information through the Business Element Manager.

Conventions Used in This Manual

This manual uses different fonts and symbols to differentiate between document elements and types of information. These conventions are summarized in the following table.

Conventions Used in This Manual

Notation	Description
Normal text	Normal text font is used for most of the document.
important term	The Italics font introduces new terms, highlights meaningful words or phrases, or distinguishes specific terms from nearby text.
`system command`	This font indicates a system command or its arguments. Enter such keywords exactly as shown (that is, do not fill in your own values).

a. Windows and the flying Window logo are either trademarks or registered trademarks of Microsoft Corporation.

b. Solaris® is a registered trademark of The Open Group in the U.S. and other countries.

Notation	Description
command, condition and **alarm**	Command, Condition and Alarm references appear on the screen in **magenta** text and reference the *Command Reference Manual*, the *MPS Developer User's Guide*, or the *Alarm Reference Manual*, respectively. Refer to these documents for detailed information about **Commands**, **Conditions**, and **Alarms**.
`file name / directory`	This font highlights the names of disk directories, files, and extensions for file names. It also shows what is displayed on a text-based screen (for example, to show the contents of a file.)
on-screen field	This font indicates field labels, on-screen menu buttons, and action buttons.
<KEY NAME>	A term that appears within angled brackets denotes a terminal keyboard key, a telephone keypad button, or a system mouse button.
Book Reference	This font indicates the names of other publications referenced within the document.
cross-reference	A cross-reference appears on the screen in blue. Click the cross- reference to access the referenced location. A cross-reference that refers to a section name accesses the first page of that section.
	The Note icon identifies notes, important facts, and other keys to understanding.
	The Caution icon identifies procedures or events that require special attention. The icon indicates a warning that serious problems may arise if the stated instructions are not followed implicitly.
	The flying Window icon identifies procedures or events that apply to the Windows operating system only.[a]
	The Solaris icon identifies procedures or events that apply to the Solaris operating system only.[b]

a. Windows and the flying Window logo are either trademarks or registered trademarks of Microsoft Corporation.

b. Solaris® is a registered trademark of The Open Group in the U.S. and other countries.

Solaris and Windows Conventions

This manual depicts examples (command line syntax, configuration files, and screen shots) in Solaris format. Windows-specific commands, procedures, or screen shots are shown when required. The following table lists general operating system conventions used with either the Solaris or Windows operating system.

	Solaris	Windows
Environment	`$PPROHOME`	`%PPROHOME%`
Paths	`$PPROHOME/bin`	`%PPROHOME%\bin`
Command	**`<command> &`**	**`start /b <command>`**

Two-Button (Windows) vs. Three-Button (Solaris) Mouse

<SELECT>	Left button
<ADJUST>	Left and Right together
<MENU>	Right button

<SELECT>	Left button
<ADJUST>	Middle button
<MENU>	Right button

Trademark Conventions

The following trademark information is presented here and applies throughout for third party products discussed within this manual. Trademarking information is not repeated hereafter.

Solaris® and Motif® are registered trademarks of The Open Group in the U.S. and other countries.

Solaris, SunOS, OpenWindows, SPARC, and UltraSPARC are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries.

Microsoft, MSSQL, Windows, Internet Explorer, and the Flying Windows logo are either trademarks or registered trademarks of Microsoft Corporation.

Oracle® is a registered trademark of Oracle Corporation.

Sybase™ and SYBASE™ are trademarks of Sybase, Inc. or its subsidiaries.

Informix® and INFORMIX® are registered trademarks of Informix Corporation or its affiliates.

Chapter 1
Introduction to the Avaya BCM-IVR Integration

This chapter covers:

1. **The Avaya BCM-IVR Integration**
2. **What functionality does the IVR integration add to the Avaya BCM?**

The Avaya Business Communications Manager (Avaya BCM) - Interactive Voice Response (IVR) Integration

Avaya Business Communications Manager (Avaya BCM) is a fully-integrated communication system for small businesses, government and retail networks, and enterprise branch offices.

Interactive Voice Response is a telecommunications system that uses a prerecorded database of voice messages to present options to a user, typically over telephone lines. Users can input information using the keys on their touchtone phones.

The following terms describe the relationship of the Avaya BCM product with the integration of the IVR platform.

- BCM 4.0: hardware platform running Carrier Grade Linux.
- BCM-IVR 2.1: MPS runtime environment on the BCM 4.0 hardware platform.
- BCM-IVR: MPS 2.1 software tools (PeriView, PeriProducer, PeriReporter) that work with the Avaya BCM.

What functionality does the IVR integration add to the Avaya BCM?

The IVR solution is a suite of products that allows businesses to create applications that callers use to access information, by responding to a series of prompts through their touchtone phones.

The IVR applications are developed for specific customer needs and in many cases are integrated with databases to enable real-time queries and updates. Some examples of IVR applications are:

- A credit card company's application that lets customers access their accounts, receive real-time account balances, and transfer funds between accounts.
- A bus station's IVR application that lets customers book seats on a trip or review projected departure times.
- A bookstore's application that lets customers hear store hours, purchase books, and check the delivery of an existing order.

IVR administration is handled using PeriView (see Chapter 3) and PeriReporter (see Chapter 4). Applications are created using PeriProducer. Host communications are managed using COMMGR (see Chapter 2). Variances in functionality between the MPS and the Avaya BCM-IVR integration are detailed throughout this document.

Note: For information on PeriProducer's variations in functionality for the Avaya BCM-IVR integration, see the *PeriProducer for the Avaya BCM-IVR Platform* manual.

Documentation issues

Issue

Documentation currently refers to hardware as the MPS.

Wherever the documentation uses MPS, assume that this refers to the Avaya BCM.

Issue

Avaya BCM is considered an MPS component.

Wherever there are references to an MPS component, assume that this refers to a Avaya BCM component.

Chapter 2
COMMGR for the Avaya BCM Platform

This chapter covers:

1. **Documentation issues and workarounds**
2. **Installation issues and workarounds**
3. **Functionality issues and workarounds**

Documentation issues and workarounds

Issue

Documentation currently refers to hardware as the MPS.

Wherever the documentation uses MPS, assume that this refers to the Avaya Business Communications Manager (Avaya BCM).

Issue

Avaya BCM is considered an MPS component.

Wherever there are references to an MPS component, assume that this refers to a Avaya BCM component.

Issue

Not all documentation can be found on the Avaya BCM.

PDF versions of documentation are located on the Website, www.avaya.com.

Issue

PeriDoc is not available for the Avaya BCM.

Use the PDF versions of documentation found on the website, www.avaya.com.

Installation issues and workarounds

Issue

You need to obtain a license (keycode) and add it to the Avaya BCM to use COMMGR.

If you are installing a new Avaya BMC-IVR system, see the *IVR Installation and Configuration Guide* to learn how to obtain a keycode from the KRS (Keycode Retrieval System).

If you are upgrading your current Avaya BMC-IVR system to BMC-IVR 2.1, contact Technical Support (1-800-4). Select option 5 > option 1.

Tell the Technical Support Prime that you need assistance in producing a keycode for Avaya BMC-IVR. When you are connected with a Level 2 Keycode Support Prime, ask for help in producing a BCM Host Communications keycode (license file).

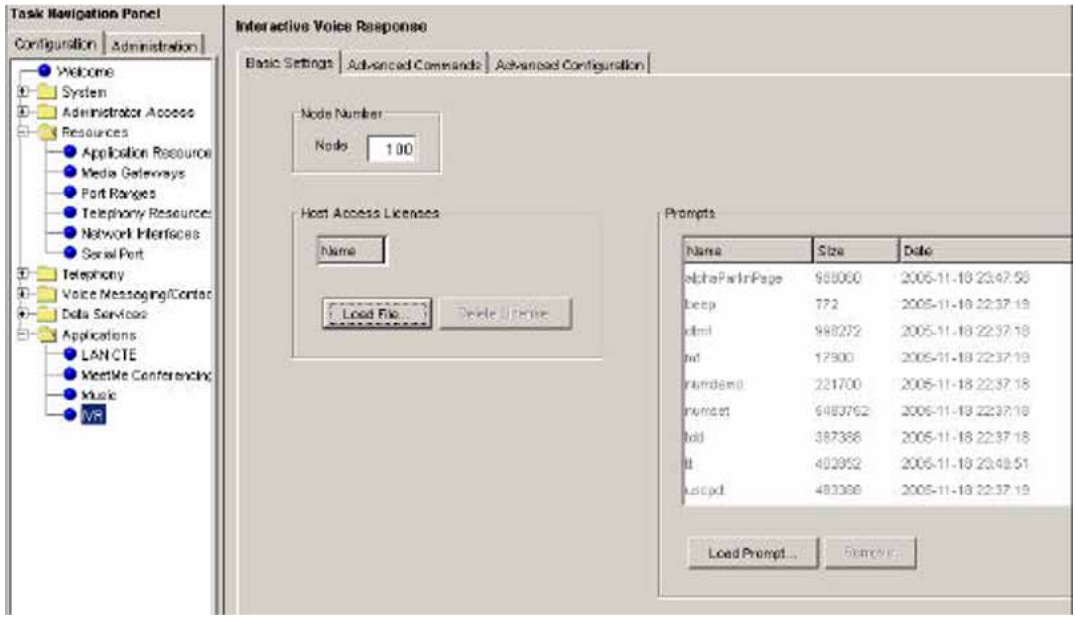
To receive the BCM Host Communications keycode, you must provide the Level 2 Keycode Support Prime with the following:

- the BCM MAC address
- the existing IVR 1.1 license file (you must send an e-mail with the existing license file attached to the Level 2 Keycode Support Prime)
- the authorization numbers obtained from purchasing the PeriProducer (NTAB4211) and PeriStudio (NTAB4210).

To find out how to obtain the BCM MAC address and the existing IVR 1.1 license file, see the *BMC-IVR 2.1 Upgrade Guide*.

When you receive an e-mail containing the keycode from the Level 2 Technical Support Prime, you are ready to load the keycode to the keycode directory in Business Element Manager.

1. Launch Business Element Manager.
2. In the **Task Navigation** panel, select the **Configuration** tab.
3. Expand the **Applications** folder and click **IVR**.
4. Enter the node number for the IVR.
5. Click **Load Keycode File** and load the keycode received from the Level 2 Technical Support Prime.



After the keycode has installed, the IVR service restarts automatically.

Functionality issues and workarounds

Issue

Only the TN3270 and ATTE host protocols are supported on the Avaya BCM. No other protocols are currently supported.

WORK AROUND

Use only TN3270 or ATTE host protocols. You can also use VCTPD as an interface to TCP/IP hosts. See the *IVR Installation and Configuration Guide* if you are installing a BMC-IVR system for the first time. See the *BMC-IVR 2.1 Upgrade Guide* if you are upgrading an existing system to BMC-IVR 2.1.

Issue

COMMGR is not supported on the Solaris and Windows platforms for Avaya BCM.

WORK AROUND

COMMGR is supported on the Linux node for the Avaya BCM.

Chapter 3
PeriView for the Avaya BCM Platform

This chapter covers:

1. **Documentation issues and workarounds**
2. **Functionality issues and workarounds**
3. **Additional alarms for the Avaya BCM platform**
4. **Issuing commands to the Avaya BCM**

Documentation issues and workarounds

Issue

Documentation currently refers to hardware as the MPS.

Wherever the documentation uses MPS, assume that this refers to the Avaya Business Communications Manager (Avaya BCM).

Issue

Avaya BCM is considered an MPS component.

Wherever there are references to an MPS component, assume that this refers to a Avaya BCM component

Issue

Not all documentation can be found on the Avaya BCM.

PDF versions of documentation are located on the website, www.avaya.com.

Issue

PeriDoc is not available for the Avaya BCM.

Use the PDF versions of documentation found on the website, www.avaya.com.

Functionality issues and workarounds

Issue

The VSH Tool is supported, but most of the menu commands are not supported.

Issue

The VSH command line is supported, but **bim** replaces the first part of most of the commands. For example, the **ccm status** command is executed as **bim status**.

Issue

Only SRP and BIM console options are supported.

Issue

Monitor component span status not supported.

Use the Business Element Manager to monitor this information.

Issue

Alarm is supported, but sample display is not accurate for the Avaya BCM.

Issue

SPIN is not supported for Avaya BCM and therefore cannot be launched from PeriView.

Issue

PERIdoc is not supported for the Avaya BCM and therefore cannot be launched from PeriView.

Detailed documentation for COMMGR, PeriReporter, PeriProducer, and PeriView is available in PDF format on the Developer or Administrator workstations. Other documentation can be found on the website, www.avaya.com.

Issue

TMS and CPS hardware do not exist on the Avaya BCM.

Issue

PeriView is not supported on the Solaris Platform for the Avaya BCM.

PeriView is supported on a Windows Platform for the Avaya BCM.

Additional alarms for the Avaya BCM platform

The following alarms have been added for the Avaya BCM platform.

Source	Alarm Code	Severity	Text Message/Description
bim	10001	1	***Message:*** "Call presented and no ports available to receive the call." ***Description:*** Not enough IVR ports configured on the Avaya BCM. ***Actions:*** Configure more IVR ports.
bim	10002	7	***Message:*** "Failed to read xref file %s::%s." Arg 1 = Full path of the cross-reference file. Arg 2 = Reason for failure. ***Description:*** Unable to read the cross-reference file. ***Actions:*** Verify that the mmfxref.dat file exists in the shown location and, if not, restore it. Otherwise delete it and perform MMF to VFS conversions again.
bim	10003	9	***Message:*** "Play Failure. Exceeded the maximum number of play lists." ***Description:*** Exceeded maximum number of items in the play list. ***Actions:*** Modify PeriProducer application to decrease the number of items in the play request.
bim	10004	7	***Message:*** "Play Failure. Unable to add vocab item '%s' to play list::%s." Arg 1 = Vocabulary item. Arg 2 = Reason for failure. ***Description:*** Unable to add vocabulary item to play list. ***Actions:*** Inspect reason for failure and take appropriate action. If the reason is ME_PLAY_LIST_FULL then modify PeriProducer application to decrease the number of items in the play request.

Source	Alarm Code	Severity	Text Message/Description
bim	10005	7	***Message:*** "Play Failure. Unknown vocabulary item '%s'." Arg-Vocabulary item. ***Description:*** Lookup of vocabulary item failed. ***Actions:*** Verify it is a recorded element in the MMF and that the MMF has been converted to VFS. If not, record the element and perform the conversion.
bim	10006	7	***Message:*** "Can't set port capabilities to %s::%s." Arg 1 = Port capabilities trying to get. Arg 2 = Reason for failure. ***Description:*** Can't set the port capabilities. ***Actions:*** Reconfigure the number of media gateways.

Issuing commands to the Avaya BCM

BIM configuration and VSH commands are as follows:

Command	Explanation
bim help <option>	Displays description of and usage for the specified BIM option.
bim beeplength <bl>	Sets the record beep length to **bl**. Valid values are 0 through 15. **bim beeplength** can only be issued from a configuration file.
bim repdevmap	Displays a report containing information about the line/device mapping.
bim repthr	Displays a report containing status of and information about all threads.
bim repvfs <.ph or all>	Displays a report containing information about the MMF to VFS mapping. Use **.ph** to get information on a single .ph file, or use **all** to get information on all .ph files.
bim repvfscab	Displays a report containing information about the IVR VFS cabinets.
bim repvoicecti	Displays a report containing information about Voice CTI.
bim status	Displays the status of all phone lines.

Line-specific commands can be issued by using **b#** where **#** is a *lnlst* argument. *lnlst* can be a single line or a range of lines. BIM VSH console line-specific commands are as follows:

Command	Explanation
b# admstatus	Displays the status of all administrative ports.
b# help <option>	Displays description of and usage for the specified BIM option.
b# repDtmf	Displays a report containing information about the DTMF interface for the line.
b# repParams	Displays a list of the currents service parameter settings for a phone line port.
b# repVfsFiles	Displays a report containing information about VFS files on this line.
b# reset	Disconnects current call, aborts I/O progress, purges command queue, resets call state to IDLE, and resets command queue state to STANDBY.
b# setParams	Sets the value of the service parameters settings.
b# status	Displays the status of the phone line port.

Chapter 4
PeriReporter for the Avaya BCM Platform

This chapter covers:

1. **Configuring windows workstations to retrieve statistics**
2. **Documentation issues and workarounds**
3. **Functionality issues and workarounds**
4. **Phone Line Statistics reports variances**

Configuring windows workstations to retrieve statistics

You can configure Windows-based PeriView workstations to act as PeriReporter collection stations. That is, you can configure the PeriView workstations to retrieve statistics from Avaya Business Communications Manager 4.0 nodes.

To configure the Windows-based PeriView workstations to retrieve statistics, the workstations must be running MPS 2.1 software with Patch Bundle 9 or higher and you must install any patches in the **Patches > Collector** folder of the *MPS 2.1 Software, Documentation, and Update CD*.

As well, the following conditions are necessary to configure a PeriView workstation to retrieve statistics:

- The Avaya Business Communications Manager (Avaya BCM) environment must be homogeneous. That is, the PeriView collection station cannot monitor a system comprised of a mix of Avaya BCMs and other systems, such as MPS 1000s or Speech Servers.
- The Avaya BCMs monitored by the collection station must be Linux-based BCM 4.0 systems.
- Each monitored Avaya BCM can have only one configured MPS component.
- The Windows-based collection station must not have a Avaya BCM component.

Configuring the collection stations

To configure the Windows-based PeriView workstations to retrieve statistics from BCM 4.0 nodes, follow the proceeding steps:

1. You must install a PeriReporter patch that contains statistics collection scripts for the BCM (**pr_sys_bcm.plx** and **pr_app_bcm.plx**) and the BCM statistics node configuration file (**bcm_stats_node.cfg**). To obtain the PeriReporter patch, contact your Avaya support representative for the current patch number and how to install it.

   Note 1: If your collector workstation has a patch level higher than Patch Bundle 9 installed, the patches necessary for collecting statistics from the BCM nodes may already be installed on your system. Check with your Avaya support representative to ensure you have the correct patch level and proceed to step 2.

   Note 2: If the file **bcm_stats_node.cfg** is already present in the **%MPSHOME%\PERIprpt\bcm folder**, proceed to step 2.

2. In a command prompt window, change the current working directory to **%MPSHOME%\PERIprpt\bcm**.
3. Edit the file **bcm_stats_nodes.cfg** file to include the host names, IP addresses, node numbers and nnadmin user passwords for each BCM.

The following output is a sample BCM statistics node configuration file:

```
#
# bcm_stats_nodes.cfg
#
# This configuration file is used by PERIprpt
# 1.21.  It identifies
# those Linux BCM (BCM 4.0) nodes from which this PERIview
# collection node will collect and report statistics.
#
# The parameters used on each line (one line
# per monitored BCM) are
# listed below.
#
# Hostname - BCM host name.
#
# IP Address - Internet address for the BCM, given as 4 decimal
# numbers in the range 0-255, separated by
# periods (i.e. 47.185.22.9).
#
# Component # - The number of the MPS component
# on the BCM.  In
# Element # Manager, locate the
```

```
# Configuration->Applications->IVR
# panel, and select the "Basic Settings" tab.
# The MPS component number
# is identified there as the "Node Number".
#
# Password - The stats collection tools
# access the BCM using the
# nnadmin user login, so the password provided here is for the nnadmin
# user.
#
# This file must be edited any time a BCM is to be added or removed
# from those monitored by the collector workstation, or any time one or
# more of the parameters for any BCM are changed (for example, when an
# administrator uses the Business Element Manager to change a BCM's
# hostname, IP address, node number, or admin user password).
#
# Lines starting with hashes (#) are comments, and are not processed.
# Monitoring of individual BCMs may be temporarily enabled or disabled
# without adding or deleting a line by simply inserting or removing the
# hash (#) character from the beginning of a line.
#
#    Hostname              IP Address       Comp #   Password
#    --------              ----------       ------   --------
#    BCM1                  47.185.22.101    1        Two3Too4To5
```

Changing the monitored Avaya BCM nodes

To add or remove monitored BCM nodes, or edit the parameters of monitored BCM nodes, you must edit the BCM statistic node configuration file:

bcm_stats_node.cfg.

Note: If you use Business Element Manager to change a BCMs hostname, IP address, node number or admin user password, you must edit the BCM statistics node configuration file to reflect the changes made in Business Element Manager.

Documentation issues and workarounds

Issue

Documentation currently refers to hardware as the MPS.

Wherever the documentation uses MPS, assume that this refers to the Avaya BCM.

Issue

Avaya BCM is considered an MPS component.

Wherever there are references to an MPS component, assume that this refers to a Avaya BCM component

Issue

Not all documentation can be found on the Avaya BCM.

PDF versions of documentation are located on the Avaya website, www.avaya.com.

Functionality issues and workarounds

Issue

Single Node Environment is not supported.

Use only multi-node environments for Avaya BCM.

Issue

System.Span statistics are not supported.

Use the Business Element Manager to collect this information.

Issue

Span Statistics reports are not supported.

Use the Business Element Manager to collect this information.

Issue

A call is defined as a call *answered by an IVR application* and not necessarily a call that comes in on a Avaya BCM port.

A call that is transferred to an IVR application is always considered a new call, even if it was already answered by an IVR application. For example, if an IVR application answers a call, transfers it to voice mail, and voice mail transfers it back to the application, the statistics shows this as 2 calls (the initial call to the application, and the call from voice mail to the application.)

Issue

PeriReporter is not supported on the Solaris Platform for the Avaya BCM.

PeriReporter is supported on a Windows Platform for the Avaya BCM.

Phone Line Statistics reports variances for the Avaya BCM platform

The following variances exist for phone line statistics reports for the Avaya BCM.

Statistic	Explanation, including any variance for Avaya BCM
MIS	*Minutes In Service:* The number of minutes the line was in an in-service state -- connected and able to take calls.
SecsPeriod	*Seconds in Period:* The number of seconds in a given period. For example, 15 minutes = 900 seconds.
Utilized	*Percent Utilization:* The percentage of time the line was in a busy state-- out of service or taking calls.
Calls	*Number of Calls Ended:* The total number of calls ended on this line.
ACS	*Average Call Seconds:* The average call length in seconds.
UAB	*User Abandoned Calls:* The number of calls that were terminated because the caller the caller elected not to follow through with the call.
SAB	*System Abandoned Calls:* The number of calls that were terminated by the system (either application or BIM).
CR	*Number of Calls Referred:* The total number of calls on this line that were transferred to an internal device (i.e. VoiceMail) or external extension.
ARS	*Average Referral Seconds:* Not supported on Avaya BCM since the IVR does not track when the transferred call ends.
UAR	*User Abandoned Referrals:* Not supported on Avaya BCM since the IVR does not track when the caller hangs up after the call is transferred.
FR	*Number of Failed Referrals:* The number of times the Avaya BCM did not complete the transfer process.

Chapter 5
Folders on the Avaya BCM Platform

This chapter covers:

1. **Backing up folders**
2. **Folders provided for use by IVR developers**

Backing up folders

When backing up IVR Data and IVR Configuration information through the Business Element Manager, many folders are included in the backup process. To determine which folders are backed up, consult the following lists. If an application generates new data or configuration information, these lists can help determine where to save the files so they are included in the backup process.

To backup the IVR Configuration, the following folders are backed up:

- Everything in the **`/opt/vps/common/etc`** folder except alarm files
- Everything in the **`/opt/vps/mpsN/apps`** folder
- Everything in the **`/opt/vps/mpsN/apps/lib`** folder
- Everything in the **`/opt/vps/mpsN/etc`** folder
- Everything in the **`/opt/vps/mpsN/log`** folder
- Everything in the **`/opt/vps/mpsN/stats`** folder except 15-minute statistics files
- Everything in the **`/opt/vps/PERIpdp/etc`** folder
- Everything in the **`/opt/vps/PERIplic/etc`** folder
- Everything in the **`/opt/vps/PERIhostp/etc`** folder
- Everything in the **`/opt/vps/PERIase/etc`** folder
- Everything in the **`/var/nn/ivr/data`** folder
- All vocabularies in the IVR VFS cabinets.

Note: **Multimedia files (*.mmi and *.mmd) are not backed up.**

If a customer wants to back up the IVR Data, the IVR Configuration files and the following are backed up:

- All CMR Recordings
- Everything in the **`/var/nn/ivr/fax`** folder

Folders provided for use by IVR developers

IVR applications started using Business Element Manager run as the Peri user. As such, IVR applications can only create and update files in folders with the same ownership.

The following folders have the Peri ownership. IVR application can use these folders to create files:

- **`/opt/vps/mpsN/etc`**
- **`/opt/vps/mpsN/apps`**
- **`/opt/vps/mpsN/log`**
- **`/opt/vps/mpsN/stats`**
- **`/opt/vps/common/etc`**
- **`/opt/vps/common/stats`**
- **`/var/nn/ivr/data`**
- **`/var/nn/ivr/fax`**
- **`/var/nn/ivr/mmf`**

Note: **Multimedia files (*.mmi and *.mmd) are not backed up.**

Business Element Manager provides the ability to transfer files from these folders exclusively. All the files transferred using the Business Element Manager have their ownership set to Peri.

Index

A

ACS phone line statistics 31
admstatus 25
alarms 22
  new for the Avaya BCM platform 23
ARS phone line statistics 31
Avaya BCM console options 22
Avaya BCM terminology 17, 21, 29
Avaya BCM Unified Manager 22, 30
Average Call Seconds 31
Average Referral Seconds 31

B

Backing up 33
beeplength 24
BIM commands 24
BIM console options 22

C

call, definition in Avaya BCM 30
Calls phone line statistics 31
commands 24
component span status 22
console options 22, 22
conventions
  manual 11
CPS hardware 22
CR phone line statistics 31

D

documentation 17, 29
  variances in PeriView 21

F

FR phone line statistics 31
functionality 19, 30, 34
  variances in PeriView 22

H

help 24, 25
host protocols 19

I

installation variances in COMMGR 18
IVR Configuration 33
IVR Data 33

K

keycode 18
KRS (Keycode Retrieval System) 18

L

licensing COMMGR 18
line-specific commands 25
lnlst 25

M

manual conventions 9, 9, 10, 10
Minutes in Service 31
MIS phone line statistics 31
MPS terminology 17, 21, 29
multi-node environments 30

N

Number of Calls Ended 31

Number of Calls Referred 31
Number of Failed Referrals 31

P

Percent Utilization 31
PeriDoc 22, 22
PeriPLIC 18
Phone Lines Statistics reports variances 31
protocols 19

R

repdevmap 24
repDtmf 25
reports, variances in 31
repParams 25
repthr 24
repvfs 24
repvfscab 24
repVfsFiles 25
repvoicecti 24
reset 25

S

SAB phone line statistics 31
sample display 22
Seconds in Period 31
SecsPeriod phone line statistics 31
setParams 25
single node environments 30
Solaris platform support 19, 19, 30
Span Statistics reports 30
span status 22
SPIN 22
SRP console options 22, 22
status 24, 25
System Abandoned Calls 31
System.Span statistics 30

T

terminology 17, 21, 29
TMS hardware 22
TN3270 19

U

UAB phone line statistics 31
UAR phone line statistics 31
Unified Manager 30
User Abandoned Calls 31
User Abandoned Referrals 31
Utilized phone line statistics 31

V

variances in COMMGR 17, 19
variances in PeriReporter 29, 30, 34
vocabulary 29
VPS terminology 17, 21, 29
VSH command line 22
VSH commands 24
VSH Tool 22
VT100 19